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REMARKS

New dependent claims 56-61 have been added. Support for these new claims is provided, for example, at page 39, lines 7-9 of the specification. Upon entry of this amendment, claims 3-8, 10, 12-40, 42-47, 49 and 51-61 will be pending in the application.

Rejection Under 35 U.S.C. §103(a)

The pending claims have been examined only insofar as they read on an aqueous pesticidal composition comprising a cationic surfactant composition comprising at least one elected etheramine surfactant of formula (5) and at least one elected diamine surfactant of formula (6).

Applicants acknowledge the withdrawal of U.S. Patent No. 6,248,695 (Griffiths et al.) and U.S. Patent No. 5,668,085 (Forbes et al.) in support of the rejection under 35 U.S.C. §103(a).

The rejection of pending claims 3-8, 10, 12-40, 42-47, 49 and 51-55 under 35 U.S.C. §103(a) has been maintained based only on the combined teachings of U.S. Patent No. 6,420,311 (Stridde et al.) and U.S. Patent No. 5,750,468 (Wright et al.). Applicants respectfully submit that this reconfiguration of cited references nevertheless fails to establish a *prima facie* case of obviousness with respect to the claimed invention for the reasons already of record and the additional reasons set forth below. In particular, Applicants maintain that Stridde and Wright, either individually or in combination, do not teach or suggest the desirability of, nor motivate one skilled in the art to obtain the claimed invention including a cationic surfactant composition comprising a first surfactant selected from a Markush group including the elected etheramine of formula

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(5), and a second surfactant selected from a Markush group including the elected diamine of formula (6).

The subject matter of the pending claims has been discussed previously. Applicants wish to further point out, as discussed in the response (Amendment C) filed December 22, 2004 and described at page 13, line 22 to page 14, line 12 of the specification, that it has been discovered that a second surfactant (e.g., certain diamines, triamines or polyamines) may function as a compatibilizer (i.e., hydrotape) in a composition containing a pesticide and a first surfactant (e.g., an etheramine surfactant) and stabilize the composition against phase separation. Because the second surfactant can stabilize pesticidal compositions, the need to add a non-surfactant stabilizer may be eliminated. It has been further discovered that the second surfactant may also function as a pesticidal efficacy enhancer. The efficacy enhancement of the combination of the first and second surfactants has been discovered to be as effective as a similar amount of the first surfactant alone. Therefore, one aspect the present invention provides for the addition of a second surfactant to pesticidal compositions that advantageously functions as both a stabilizer and a herbicidal efficacy enhancer. The net result is: (1) a reduction in excipient loading by virtue of the elimination of the requirement for a non-surfactant hydrotape; (2) concentrated pesticidal compositions having a level of stability and a pesticide concentration that could not be attained in the absence of the second surfactant; and (3) pesticidal efficacy comparable to compositions known in the art.

Stridde describes herbicidal compositions comprising a herbicide such as a glyphosate salt and a surfactant component comprising certain alkoxylated polyether diamines, esterified

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alkoxylated polyether diamines and mixtures thereof similar to the diamines of formula (6) as defined in the pending claims.

Wright describes herbicidal compositions comprising glyphosate or a salt thereof and certain etheramine surfactants, including alkoxylated tertiary etheramines, alkoxylated or non-alkoxylated quaternary etheramines and alkoxylated etheramine oxides. Some of the specific etheramine surfactants disclosed by Wright fall within formula (5) as defined in the pending claims.

Stridde is silent as to combining any co-surfactant with the disclosed diamine surfactants as required in the cationic surfactant composition of the claimed invention. In describing the disclosed invention, Stridde et al. define that "[t]he term 'surfactant composition' means the surfactants of the present invention blended with one or more formulation aids" (col. 7, lines 2-5). Formulation aids include neutralizing agents, water, anti-freeze agents or mixtures thereof (col. 4, lines 45-58). Co-surfactants are not mentioned. In the prophetic application of their invention, Stridde et al. employed the diamine surfactant alone in combination with a source of glyphosate (RODEO® mono-isopropylamine glyphosate salt concentrate) (See Examples 3 and 6).

Notably, Stridde et al. prophetically teach that that "[t]he [diamine] surfactants of the present invention are expected to enhance the bioefficacy of herbicides because they have twice the amine content as traditional herbicide surfactants (i.e., tallowamine ethoxylates). This increased amine content will likely enhance the ability of the herbicide to penetrate the tissue of the vegetation, thereby increasing the bioefficacy of the herbicide" (col. 3, lines 14-21). Accordingly, in order to obtain the enhanced bioefficacy touted by Stridde et al., one skilled in the art would have been

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motivated to use only "increased amine content" surfactants rather than combine the disclosed diamines with an etheramine surfactant of formula (5) as disclosed in Wright. Such a combination would decrease the amine content of the surfactant component and undermine the bioefficacy enhancement purported to be attained by Stridde's disclosed invention.

Stridde therefore leads one skilled in the art away from the claimed combination and offers no reason, motivation or suggestion, either expressly or impliedly, to modify the disclosed compositions containing glyphosate and certain diamine surfactants by inclusion of a co-surfactant, much less an etheramine surfactant of formula (5).

On page 3 of the Office action, the disclosure at col. 8, lines 26-34 of Wright is cited and partially quoted. The entire text of Wright at col. 8, lines 26-41 is set forth below:

"In addition to glyphosate or a salt thereof and the etheramine surfactant, any of a variety of further ingredients or adjuvants may be included in formulations of the present invention as long as such added materials are not significantly antagonistic to the glyphosate herbicidal activity. Examples of such added materials illustratively include anti-gelling agents, antifreezes, thickeners, dyes, antimicrobial preservatives or additives to further enhance herbicidal activity, such as ammonium sulfate or fatty acids.

A second surfactant of a class other than etheramines, for example a primary or secondary alcohol ethoxylate, an alkyl ester of sucrose or sorbitan, or an alkyl polyglucoside may also be included. When such a second surfactant is present, it is preferable that the weight/weight ratio of etheramine to the second surfactant is greater than about 1:1, most preferably greater than about 2:1, for example 4:1."

When read in context, the mention of "additives to further enhance herbicidal activity, such as ammonium sulfate or fatty

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acids," is only a general reference regarding possible additives. Such a generalized statement includes an innumerable set of potentially herbicidal activity-enhancing, non-surfactant additives that are known in the art and cannot reasonably be said to motivate or direct one skilled in the art to select a co-surfactant, much less the diamine surfactant of Stridde, from the myriad of possible additives including ammonium sulfate and fatty acids.

However, with respect to the possibility of combining the etheramine surfactants with a co-surfactant, the disclosure in the next succeeding paragraph of Wright is much more specific and leads one away from the claimed combination. Wright teaches that a second surfactant of a class other than etheramines such as certain nonionic, non-amine, surfactants, including primary alcohol ethoxylates, secondary alcohol ethoxylates, alkyl esters of sucrose or sorbitan or alkyl polyglucosides (APG) may be included. This teaching regarding suitable co-surfactants is borne out in every Example of Wright in which a co-surfactant (particularly an alkyl polyglucoside or an ethoxylated linear primary or secondary alcohol) is combined with the etheramine surfactant (See Example 12, col. 12, lines 31-33; and Example 17, col. 15, line 67 to col. 16, line 48).

The Office must consider the teaching of the entire reference, including portions that lead away from the claimed invention (See MPEP §2143.03.VI). Accordingly, while Wright mentions the possibility of "additives to further enhance herbicidal activity, such as ammonium sulfate or fatty acids," when it comes to the possibility of a co-surfactant, the specific disclosure in Wright of selecting a nonionic, non-amine surfactant for combination with the disclosed etheramine surfactants directs the skilled person away from the claimed invention. When the reference is considered as a whole, Wright

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fails to provide one skilled in the art with any direction or motivation to select the diamine surfactant of Stridde from the myriad of potentially herbicidal activity-enhancing additives including ammonium sulfate and fatty acids. As to a co-surfactant, the clear teaching of Wright is to select a nonionic, non-amine surfactant for combination with the disclosed etheramine surfactants. Wright therefore offers no teaching or suggestion, either expressly or impliedly, of combining the etheramine surfactant with a diamine co-surfactant.

The Office suggests that one skilled in the art "would have been motivated to combine multiple surfactants as taught in the references in order to take advantage of the characteristics provided by the disclosed surfactants." The Office fails to articulate what those characteristics might be other than perhaps the general utility of any purportedly useful surfactant in improving pesticidal activity. It is respectfully submitted that the Office cannot properly support a *prima facie* case of obviousness with respect to the claimed combination with such a generic statement of motivation to combine. Surfactants are generally intended to enhance pesticidal activity, but that does not motivate one skilled in the art to combine surfactants. Nothing in the disclosure of Stridde or Wright teaches or suggests selecting particular co-surfactants (e.g., certain diamines, triamines or polyamines) to function as a compatibilizer or hydrotape in a pesticidal composition containing a first surfactant (e.g., an etheramine surfactant) so as to attain higher pesticide loadings in a stable concentrate while maintaining pesticidal efficacy.

"The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination"

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(See MPEP §2143.01). Moreover, "[t]o support the conclusion that the claimed invention is directed to obvious subject matter, either the references must expressly or impliedly suggest the claimed combination or the examiner must present a convincing line of argument as to why the artisan would have found the claimed invention to have been obvious in light of the teaching of the references" (See MPEP §2142). Nothing in the disclosure of Stridde expressly or impliedly suggests that the diamine surfactants are suitable or desirable to combine with any co-surfactant. In fact, Stridde teaches away from the claimed combination and motivates one skilled in the art to use only "increased amine content" surfactants. Wright teaches the skilled person to combine the disclosed etheramine surfactants with certain nonionic, non-amine co-surfactants.

In view of the above, it is respectfully submitted that the Office has not met its initial burden of establishing a *prima facie* case of obviousness with respect to the invention defined in independent claims 3 and 42. Claims 4-8, 10, 12-40, 52, 53, and 56-58 which depend directly or indirectly from claim 3, and claims 43-47, 49, 51, 54, 55 and 59-61, which depend directly or indirectly from claim 42, are likewise submitted as patentable over the cited art for the reasons stated with respect to claims 3 and 42 and for the additional features set forth therein.

Although a *prima facie* case of obviousness is lacking and a showing of unexpected results not required, applicants wish to clarify the prosecution record in response to the comments at the bottom of page 4 of the Office action. As detailed below, the specification discloses evidence of enhanced pesticidal performance obtained by the claimed surfactant combination as compared to use of similar amounts of the surfactants in isolation. However, as noted above, the advantage provided by the claimed surfactant combinations is not limited to increased

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pesticidal performance, and includes the provision of fully loaded, highly stable, concentrated pesticidal compositions with reduced excipient loading and pesticidal efficacy comparable to compositions known in the art.

The surfactants listed in the Component Table at page 53 of the specification correspond to elected surfactant formulae (5) and (6) as follows: component numbers C01 and C04 correspond to surfactant formula (5); and component numbers C02, C09 and C10 correspond to surfactant formula (6).

Example 5 provides evidence of enhanced performance for the combination of elected surfactant species formula (5) (component C01) and formula (6) (component C02) as compared to those surfactants in isolation as follows: Table 5a at page 63 of the specification shows that trials 659B6S and 659C8Q contain only surfactant C01 (9.1 wt%), trial 659D4B contains only surfactant C02 (9.1 wt%), and trials 664B7E, 664A3G, 662C1R and 662D9S contain surfactants C01 and C02 in combination (~9.1 wt% C01 + C02).

Analysis of the Table 5b data presented at page 63 of the specification indicates the following average ABUTH % control over the application rate range of 100 g a.e./ha to 400 g a.e./ha: C01 gave 64.2% average control; C02 gave 64.8% average control; and C01 + C02 gave 73.4% average control. At an application rate range of 200 g a.e./ha to 400 g a.e./ha: C01 gave 79.9% average control; C02 gave 78.6% average control; and C01 + C02 gave 81.8% average control.

Analysis of the Table 5c data presented at page 64 of the specification indicates the following average ECHCF % control over the application rate range of 100 g a.e./ha to 400 g a.e./ha: C01 gave 49.9% average control; C02 gave 53.4% average control; and C01 + C02 gave 55.2% average control. At an application rate range of 200 g a.e./ha to 400 g a.e./ha: C01



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gave 60.3% average control; CO2 gave 62.0% average control; and  
CO1 + CO2 gave 62.9% average control.

CONCLUSION

Applicants respectfully request reconsideration and  
withdrawal of the rejection under 35 U.S.C. §103(a), and solicit  
allowance of the pending claims. The Examiner is invited to  
contact the undersigned attorney should any issues remain  
unresolved.

The Commissioner is authorized to charge the fee under for  
a one-month extension of time up to and including April 21, 2006  
and any other fees in connection with this amendment to Deposit  
Account No. 19-1345.

Respectfully submitted,



Vincent M. Keil, Reg. No. 36,838  
SENNIGER POWERS  
One Metropolitan Square, 16th Floor  
St. Louis, Missouri 63102  
(314) 231-5400

VMK/JDH/jmd/exm

Mail Stop AMENDMENT  
Via Facsimile (571) 273-8300